

# Astrometry

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29 May 2008

## Poll and Priority Levels

- ▶ 36 Questions to Evaluate Community Response to ExoPTF Report
- ▶ Poll taken of Committee members, other Committees, and Beyond.
- ▶ Set Priorities for next decade, vote 1-10 scale:
  - ▶ 9-10: Should be recommended to the decadal survey
  - ▶ 7-8: Strongly supported, but not at the scale of the decadal survey
  - ▶ 5-6: Worthwhile if it can be accomplished with modest additional investment
  - ▶ 3-4: Somewhere in between
  - ▶ 1-2: Waste of time/resources

# Highest Priorities

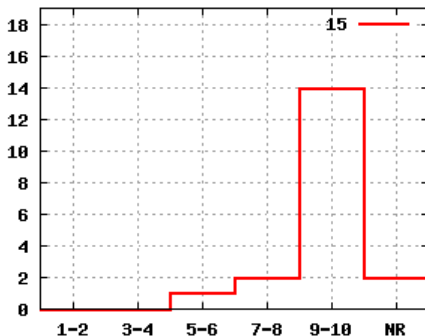
- ▶ Low-mass planets
- ▶ Precursor “finder” mission for future direct imaging
- ▶ Dynamics of multi-planet systems
- ▶ **Unanimous** support for non-exoplanet science that can result

**All can be supported by 5 year, 1 micro-as mission.**

Secondary Priorities and Lower Priorities: After the Break.

## Ready Now

For a space-based astrometric mission, the ExoPTF recommended “an abbreviated Formulation Phase should be completed, so that the Implementation Phase can begin leading to operations in the 6-10 year time frame.”

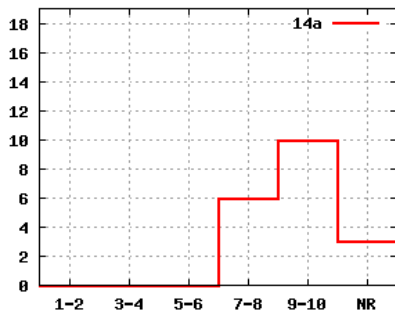


## Non-exoplanet Science

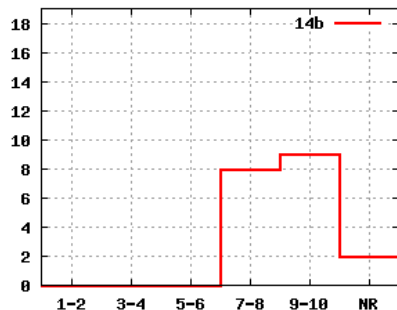
**Unanimous** support for non-exoplanet science that can result

14. How important are the non-exoplanet aspects of a major astrometric mission:

For maximizing the science output?



For political palatability of the mission to the astronomical community as a whole?



# Shri Kulkarni: Non-Exoplanet Science with a Micro-arcsecond Astrometry Mission

Homework: Tell a non-exoplanet scientist at your home institution about science with a micro-arcsecond astrometry mission, and do not mention exoplanets.

# Ben Lane: Exoplanet Science with a Micro-arcsecond Astrometry Mission

# Break Time: Meet Back Here at 10:30

# Alan Boss: Theory Topics Supporting Potential Astrometric Discoveries

# Steve Pravdo: Other Strongly Supported Astrometric Programs

## Less Strongly Supported Recommendations

- ▶ Radio Astrometry for Exoplanet Science
  - ▶ Not a strong science driver for design of future arrays
  - ▶ Worthwhile if existing facilities are capable.
- ▶ Stellar Masses/Distances in Support of Exoplanet Program
- ▶ Demonstrating Technology Shared with Future Direct Imaging Mission
- ▶ Astrometric Support for Microlensing
  - ▶ Should not impact design of a space astrometry mission.
  - ▶ Worthwhile if the mission design happens to support it.

# United States Interferometry Consortium

- ▶ Develop White Paper for Interferometry for Decadal Survey
- ▶ **Marseille SPIE in June: Tuesday at 6:00 PM**
- ▶ Send email to [theo@chara-array.org](mailto:theo@chara-array.org) by June 16.
- ▶ Current themes:
  - ▶ Effective science operation of existing (and completed/upgraded) array facilities
  - ▶ Community access to interferometry
  - ▶ Planning and development for the future
  - ▶ *Not* on the list: a major new ground-based array facility project.
- ▶ Attend, and promote a SIM-based astrometry mission be promoted as USIC's top priority!